

CLAIMS

We claim:

1. A device for clamping and cutting an umbilical cord, said device comprising:

a first shell;

a second shell movably connected to said first shell;

a blade depending from said first shell, said blade having a first side and a second side;

a cutting support depending from said second shell;

a clamping member depending from said first shell, said clamping member being located on said first side of said blade; and

a removable clamp engageable with said first and second shells, said removable clamp being located on said second side of said blade;

said device being capable of receiving the umbilical cord adjacent said cutting support;

said first and second shells being capable of closing movement such that

(a) said clamping member will compress the umbilical cord in cooperation with said second shell on said first side of said blade,

(b) said removable clamp will compress the umbilical cord on said second side of said blade, and

(c) said blade will sever the umbilical cord in cooperation with said cutting support;

said removable clamp being separable from said first and second shells after the umbilical cord is severed.

2. The device of claim 1 wherein said first shell, said second shell, said cutting support, and said clamping member comprise a single integral structure.

1 3. The device of claim 2 wherein said single integral structure comprises
2 a polycarbonate material.

3 4. The device of claim 1 further comprising a latch for holding said first
4 and second shells in a closed position after the umbilical cord is severed.

5 5. The device of claim 1 further comprising a first guide depending from
6 said first shell and a second guide depending from said second shell wherein said
7 first and second guides cooperate to hold said first and second shells in a partially
8 open initial position for receiving the umbilical cord.

9 6. The device of claim 1 wherein said cutting support comprises a pair of
10 walls separated by a gap into which said blade may pass as the umbilical cord is
11 being severed.

12 7. The device of claim 1 further comprising at least one lateral constraint
13 depending from said second shell for limiting lateral movement of the umbilical
14 cord as the umbilical cord is being severed.

15 8. The device of claim 1 wherein said removable clamp resembles the
16 head of an animal.

17 9. The device of claim 8 wherein said removable clamp resembles the
18 head of a koala bear.

19 10. The device of claim 1 wherein each of said first and second shells has
20 an exterior surface and wherein at least one of said first and second shells
21 comprises a plurality of protrusions on its exterior surface to assist a user in
22 grasping said device.

23 11. The device of claim 1 wherein each of said first and second shells has
24 an exterior surface and wherein at least one of said first and second shells
25 comprises a plurality of recesses on its exterior surface to assist a user in grasping
26 said device.

1 12. The device of claim 1 wherein at least one of said first and second
2 shells comprises a flexible shelf for engaging said removable clamp.

3 13. The device of claim 1 wherein said second shell comprises a plurality
4 of ridges for cooperation with said clamping member to compress the umbilical cord.

5 14. The device of claim 1 wherein said clamping member comprises a
6 plurality of teeth for engaging the umbilical cord.

7 15. The device of claim 1 wherein said removable clamp comprises a clamp
8 body, a strap, a hinge connecting said clamp body to said strap, and a latch for
9 holding said clamp body and said strap in a closed position with the umbilical cord
10 compressed between said clamp body and said strap.

11 16. The device of claim 15 wherein said clamp body comprises a
12 corrugated clamping surface for engaging the umbilical cord.

13 17. The device of claim 15 wherein said strap comprises a plurality of
14 ridges for engaging the umbilical cord.

15 18. The device of claim 15 wherein said removable clamp further
16 comprises a closeout adjacent said hinge to prevent the umbilical cord from binding
17 in said hinge.

18 19. The device of claim 15 wherein said clamp body comprises a recess in
19 which a transmitter is installed for transmitting a signal that may be used to track
20 the location of said removable clamp.

21 20. The device of claim 1 wherein said removable clamp comprises a
22 polycarbonate material.
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1 21. A device for clamping an umbilical cord, said device comprising:
2 a clamp body having a face surface, a back surface, and an arcuate clamping
3 surface;

4 an arcuate strap;
5 a hinge connecting said clamp body to said strap; and
6 a latch for holding said clamp body and said strap in a closed position with
7 the umbilical cord compressed between said clamping surface and said strap.

8 22. The device of claim 21 wherein said clamp body resembles the head of
9 an animal.

10 23. The device of claim 22 wherein said clamp body resembles the head of
11 a koala bear.

12 24. The device of claim 22 wherein said face surface comprises indicia of
13 facial features of said animal.

14 25. The device of claim 22 wherein said hinge forms an ear of said animal
15 when said device is in said closed position.

16 26. The device of claim 21 wherein said back surface comprises a recess
17 capable of receiving a transmitter for transmitting a signal that may be used to
18 track the location of said device.

19 27. The device of claim 21 wherein said clamping surface comprises a
20 plurality of corrugations.

21 28. The device of claim 21 wherein said strap comprises a plurality of
22 ridges for engaging the umbilical cord.

23 29. The device of claim 21 further comprising a closeout adjacent said
24 hinge to prevent the umbilical cord from binding in said hinge.

25 30. The device of claim 21 wherein said clamp body, said strap, said hinge,
26 and said latch comprise a single integral structure.

1 31. The device of claim 30 wherein said single integral structure comprises
2 a polycarbonate material.

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1 32. A device for clamping and cutting an umbilical cord, said device
2 comprising:

3 a first shell comprising an exterior surface with a first plurality of
4 protrusions for helping to grasp said device, a first flexible shelf for engaging a
5 removable clamp, and a first guide depending from said first shell;

6 a second shell comprising an exterior surface with a second plurality of
7 protrusions for helping to grasp said device, a second flexible shelf for engaging a
8 removable clamp, a plurality of interior ridges for engaging the umbilical cord, a
9 catch protruding toward the interior of said second shell, and a second guide
10 depending from said second shell;

11 a first hinge connecting said first and second shells, said first hinge
12 permitting movement of said first and second shells between an open position and a
13 closed position;

14 a blade depending from said first shell, said blade having a first side and a
15 second side;

16 a cutting support depending from said second shell, said cutting support
17 comprising a pair of walls separated by a gap into which said blade may pass as
18 said first and second shells are moved from said open position to said closed
19 position;

20 at least one lateral constraint depending from said second shell for limiting
21 lateral movement of the umbilical cord;

22 a clamping member depending from said first shell and being located on said
23 first side of said blade, said clamping member comprising a plurality of teeth for
24 engaging the umbilical cord and at least one tab for engagement with said catch to
25 hold said first and second shells in said closed position; and

26 a removable clamp engageable with said first and second shells, said
27 removable clamp being located on said second side of said blade and comprising

1 a clamp body having a face surface, a back surface, and a corrugated
2 clamping surface, said clamp body having a shape resembling the head of a koala
3 bear, said face surface having indicia of facial features of a koala bear;

4 a strap having a plurality of ridges for engaging the umbilical cord;

5 a second hinge connecting said clamp body to said strap;

6 a closeout depending from said strap adjacent said second hinge to
7 prevent the umbilical cord from binding in said second hinge; and

8 a latch for holding said clamp body in engagement with said strap
9 with the umbilical cord compressed between said clamping surface and said strap;

10 said device being capable of receiving the umbilical cord adjacent said cutting
11 support;

12 wherein, as said first and second shells are moved from said open position to
13 said closed position,

14 (a) said clamping member will compress the umbilical cord in
15 cooperation with said second shell on said first side of said blade,

16 (b) said removable clamp will compress the umbilical cord on said
17 second side of said blade,

18 (c) said blade will sever the umbilical cord in cooperation with said
19 cutting support, and

20 (d) said first and second guides cooperate to inhibit torsional
21 displacement of said first and second shells;

22 wherein said removable clamp is separable from said first and second shells
23 after the umbilical cord is severed.

24 33. The device of claim 32 wherein said first shell, said second shell, said
25 first hinge, said cutting support, said at least one lateral constraint, and said
26 clamping member comprise a first integral structure and wherein said removable
27 clamp comprises a second integral structure.

1 34. The device of claim 33 wherein said first and second integral
2 structures comprise a polycarbonate material.

3 35. The device of claim 32 wherein said back surface of said clamp body
4 comprises a recess in which a transmitter is installed for transmitting a signal that
5 may be used to track the location of said removable clamp.
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